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R-585-7-6-38

A FIELD TRIP REPORT FOR
POTOMAC SUPPLY CORPORATION
PREPARED UNDER

TDD NO. F3-8512-28
EPA NO. WA-306
CONTRACT NO. 68-01-6699

FOR THE
HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 6, 1986

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

REVIEWED BY

APPROVED BY

(b) (4)
ENVIRON. TECHNICIAN

(b) (4)
ASSISTANT MANAGER

(b) (4)
MANAGER, FIT III

Disclaimer:

This report has been prepared for the U.S. Environmental Protection Agency (EPA) under Contract No. 68-01-6699. The content does not necessarily reflect the views and policies of EPA nor does the mention of trade names or common products constitute endorsement by EPA.

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SECTION 1

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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8512-28 for the Potomac Supply Corporation site located in Kinsale, Virginia.

1.2 Scope Of Work

NUS FIT III was tasked to complete a site inspection and sampling of the Potomac Supply site.

1.3 Summary

The site is an approximately 20-acre, active sawmill and wood treatment facility. The facility has been active as a sawmill since 1947; wood treatment began in 1975. Potomac Supply Corporation has RCRA Identification Number VAP000000753 as a small quantity generator.

Potomac Supply Corporation uses the osmosis wood treatment process, which employs chromated copper arsenate (CCA) - Type C wood preservative. The CCA-Type C is manufactured from oxide chemicals only, such as copper oxide (CuO), chromium acid (CrO_3), and arsenic acid (H_3AsO_4). The osmosis process is the only wood treatment operation ever utilized at the site.

The facility operates its wood treatment process and has its drip pad for freshly treated wood in a fully enclosed and heated building. The treating plant and chemical containment and recovery system are housed on the southwestern end of the plant property in a 270- by 775-foot metal building. The treatment plant operates as a closed system in order to ensure no discharge of process wastewater pollutants into navigable and state waters.

Prior to the construction of the storage building, the treated wood dried in the open. Two unlined lagoons were used to collect any wastewater generated during rainstorms. The CCA oxide formula used in the process is a water-borne preservative that makes these chemicals available for leaching into the ground and mobile in surface waters. Wastewater from these lagoons is currently being pumped out, remixed, and reused. A diversion system has been constructed to prevent runoff from entering the two lagoons.

The concern at this site is suspected contamination of groundwater and surface waters. Stream samples were taken in the unnamed tributary to Kinsale Branch located adjacent to the site. There were no downgradient home wells located during the field investigation. The surrounding residents are serviced by a public water supply system, which obtains its water from a well located approximately 3/4 mile northeast of the site. This well is reportedly 280 feet deep with a steel casing, no screened interval, and a yield of 45 gallons per minute (gpm). Since the public supply well is located downgradient of the site, a sample from a home well serviced by this supply was collected in order to determine possible contamination.

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SECTION 2

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2.0 FIELD TRIP REPORT

2.1 Summary

On April 24, 1986, FIT III members Monica Connolly, Brian FitzPatrick, Michael Snyder, and William Hose conducted a site inspection of the Potomac Supply Corporation. Site access was granted by Mr. Richard Gouldin, company vice president, via a telephone conversation on April 8, 1986. The FIT was accompanied by Herbert Carden and Richard Gouldin, representing Potomac Supply Corporation, and Bruce Gerber, representing Commonwealth Laboratories. Potomac Supply Corporation obtained a split sample for the on-site sample collected. Weather conditions at the time of the site visit were clear and sunny, with temperatures in the mid-60s.

The number of samples obtained was eight aqueous and five sediment, including blanks and duplicates.

2.2 Persons Contacted

2.2.1 Prior to Field Trip

Darius Ostrauskas
U.S. EPA
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107
(215) 597-6488

Keith Fowler
Virginia State Water Control Board
P.O. Box 669
Kilmarnoch, VA 22482
(804) 435-3181

Richard Gouldin
Potomac Supply Corporation
Route 203 North
Kinsale, VA 22488
(804) 472-2527

Jesse L. Royall, Jr., P.E.
Staff Engineer
Snyder Hydrodynamics, Incorporated
Box 27186
Richmond, VA 23261
(804) 643-2725

Site Name: Potomac Supply
TDD No.: F3-8512-28

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2.2.2 At the Site

William and Herbert Carden
Potomac Supply Corporation
Route 203 North
Kinsale, VA 22488
(804) 472-2527

Richard Gouldin
Potomac Supply Corporation
Route 203 North
Kinsale, VA 22488
(804) 472-2527

Bruce Gerber
Commonwealth Laboratory Representative
2209 East Broad Street
Richmond, VA 23223
(804) 648-8358

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2.4 Site Observations

- o The HNU background reading was .8 ppm; no readings above background were recorded.
- o The mini-alert was set at 1 X; no readings above background were recorded.
- o There are two unlined lagoons on site, .17 and 1.25 acres in size.
- o One lagoon has been pumped dry. The second lagoon is in the process of being remediated.
- o There were no observed releases from the lagoons.
- o There is only one on-site well in operation that is being used for both drinking and production. This well is 360 feet deep, screened from 345 to 360 feet, and has a yield of 30 gpm.
- o Downgradient home wells are serviced by a public supply system. This system receives its water supply from a well located approximately (b) (9) of the site.
- o There were no stained soils areas or sheens observed along the tributary.

2.5 PHOTOGRAPH LOG

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Photo 1 - On-site drinking/production
well pump located in front of Stoker Steel.



Water sample located off road
505. Sample taken 100 ft.
...ll.



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— Photo 3 - Downstream 1 —
—
—



— Photo 4 - Downstream 2 sample taken —
— 50 ft. downstream of #1. —

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SECTION 3

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3.0 LABORATORY DATA

3.1 Sample Data Summary

GLOSSARY

Data Summary Footnotes

In the data summary which follows, data qualifier code letters are associated with these definitions:

- ◇ This concentration reported by laboratory, but evidence to doubt presence of compound/element (may or may not be present).
- J Approximate value; detected below limit of accurate quantitation.
- [] Value is greater than or equal to the instrument detection limit, but less than the contract required reporting limit.
- UF The material was analyzed for, but was not detected. The associated numerical value is the estimated sample quantitation limit.
- F The associated numerical value is an estimated quantity because quality control criteria were not met. (See Quality Assurance Review for specifics as to magnitude or direction of variability or bias.)
- R Quality Control indicates that data are unusable (compounds may or may not be present). Resampling and/or reanalysis is necessary for verification.
- N Evidence for presence of material is presumptive (tentative identification).
- H Suspected Unreliable Result: Even though data validation criteria have been met, this result may still be suspect because false positives are a frequent problem with this particular compound or method of analysis. To prove validity, corroboration with additional analytical results or supporting information would be recommended.

TDD Number FS-8312-20
 EPA Number 69-36

TARGET COMPOUNDS
☐ Organic ☒ Inorganic

Site Name 10 Ramac Supply
 Date of Sample _____

SOLID SAMPLES WERE
 REPORTED IN DRY WEIGHT.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Aluminum	Antimony	Arsenic	Barium	Beryllium	Calcium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Remarks
MCD615	Home Well 1	AQ	ug/L						13600	[5]		[20]	[36]		[4790]		
MCD622	Home Well 8	AQ	ug/L	[36]		[162]			21000			[51]	180		11300		
MCD624	On Site Well	AQ	ug/L						13900				[36]		5370		
MCD626	Downstream 1	AQ	ug/L	[130]		[84]			[4610]				1990		[2090]		Dup *
MCD627	Downstream 2	AQ	ug/L	[133]		[35]			[4700]			[45]	2090		[2090]		
MCD628	Upstream	AQ	ug/L	[168]		[52]	[1.2]		[3500]				1270		[3640]		
MCD629	Blank	AQ	ug/L	[60]								[17]	[178]				
MCC936	Dup Downstream 1	AQ	ug/L	[150]		[34]			[4600]			[12]	2060		[2070]		Dup *
MCD630	Downstream 1	SOL	mg/kg	7500		71	[71]		[1570]	51		[39]	45100	11	[420]		
MCD631	Downstream 2	SOL	mg/kg	4610		17	[41]		[895]	23		[21]	14600	7.4	[424]		
MCD632	Upstream	SOL	mg/kg	10400			[147]		[1420]	[18]	[17]	[27]	52500	15	[1010]		
MCD634	Dup Downstream 1	SOL	mg/kg	11100		95	[112]		[1940]	78		[52]	73400	14	[226]		
MCD635	Blank	SOL	mg/kg										[13]				

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

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EPA Number 6A-526☐ Organic☒ InorganicSite Name Poloma Supply
Date of Sample _____SOLID SAMPLES WERE
REPORTED IN DRY WEIGHT.

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Tin	Vanadium	Zinc	Cyanide	Percent Solids (%)	Remarks
MCD615	Home Well 1	AQ	ug/L			[14] [◇]	11000		47500				35 [◇]		N/A		
MCD622	Home well 8	AQ	ug/L	19		[4420]			17700				778		"		
MCD624	On site well	AQ	ug/L	5370		11600			42500				[11] [◇]		"		
MCD626	Downstream 1	AQ	ug/L	116		[2000]			[4750]				[16] [◇]		"		
MCD627	Downstream 2	AQ	ug/L	119		[2000]			5280				[12] [◇]		"		
MCD628	Upstream	AQ	ug/L	50		[1680]		[3.1] [◇]	5060				[4.6] [◇]		"		
MCD629	Blank	AQ	ug/L			[15]							[20]		"		
MCD936	Sup Downstream 1	AP	ug/L	114		[1950]		10	[4860]				[17] [◇]		"		
MCD630	Downstream 1	SOL	mg/kg	399					[1770] [◇]			[30]	93 [◇]		28%		
MCD631	Downstream 2	SOL	mg/kg	136	[0.06] [◇]	[612]			[964] [◇]			[19]	42 [◇]		54%		
MCD632	Upstream	SOL	mg/kg	318	[18] [◇]	[1440]			[1620] [◇]			[34]	68 [◇]		24%		
MCD634	Sup Downstream 1	SOL	mg/kg	597					[1710] [◇]			[39]			21%		
MCD635	Blank	SOL	mg/kg						[432]				[19]		100%		

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NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

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3.2 Quality Assurance Review

3.2.1 Inorganic Data: Lab Case 5880

3.2.1.1 Introduction

The findings offered in this report are based on a general review of all available inorganic laboratory data, blank analysis results, matrix spike and duplicate results, calibration data, and ICP interference data.

3.2.1.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

Constituent	Samples with Questionable Results
aluminum	MCD622, MCD626, MCD627, MCD628, and MCD936
chromium	MCD615 and MCD632
cobalt	MCD632
copper	All positive sample results
iron	MCD615, MCD622, and MCD624
magnesium	MCD631, MCD632, and MCD634
mercury	MCD631
nickel	MCD615 and MCD632
silver	MCD628
sodium	All solid sample results
zinc	All positive sample results, except MCD622

The aforementioned results were designated questionable because there is evidence to doubt the presence of these compounds (they may or may not be present). Generally, these data are best used to demonstrate that substantially greater levels of environmental contamination do not exist in the above sample results.

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- o Due to transcription error, the laboratory incorrectly reported the result for mercury in sample MCD631. The data summary has been corrected for this error.
 - o The actual detection limit for selenium may be substantially higher than reported in sample MCD630.
 - o The reported result for zinc in sample MCD615 may not reflect the average concentration present.
 - o The reported result for chromium and iron may not reflect the average concentration present in samples MCD630 and MCD634 (solid field duplicates). Similarly, the reported result for silver in sample MCD626 and MCC936 (aqueous field duplicates) may not reflect the average concentration present.
 - o Although zinc and magnesium are questionable in samples MCD630 and MCD634 (solid field duplicates), if they are actually present, the reported results may not reflect the average concentration present. This also true for aluminum and copper in the aqueous field duplicates (samples MCD626 and MCC936).
 - o Although there is no reason to suggest that any additional sample results are questionable, it was not possible to verify the results for arsenic, selenium, thallium, and lead due to insufficient documentation. Similarly, it was not possible to verify that results within five times of the instrument detection limit are not artifactual.

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3.2.1.3 Findings

- o Field and/or laboratory blank analysis revealed the presence of aluminum, chromium, cobalt, copper, iron, magnesium, mercury, nickel, silver, sodium, and zinc at sufficient levels to question the aforementioned sample results.
- o Examination of raw data revealed that the reported result for mercury in sample MCD631 was in the ug/l unit instead of the required mg/kg unit. Both results, however, were provided in the raw data but were incorrectly transcribed into the reported form 1.
- o The matrix spike result for selenium in sample MCD630 exhibited zero recovery.
- o The laboratory duplicate analysis result exhibited some variability for zinc in sample MCD615.
- o The field duplicate analysis results for sample MCD630 and MCD634 (aqueous field duplicate) exhibited some variability for chromium and iron. This is also true for silver in samples MCD626 and MCC936 (solid field duplicates).
- o The field duplicate analysis result for the solid samples MCD630 and MCD634 exhibited some variability for zinc and magnesium. This is also true for aluminum and copper in the aqueous field duplicate samples MCD626 and MCC936.
- o The laboratory did not include absorbance in the raw data for arsenic, selenium, thallium, and lead, only final concentration. Therefore, errors resulting from conversion to final concentration could not be ascertained. Additionally, low level results could not be verified since field and laboratory blanks were reported in the same manner and results which are just below instrument detection limits were not provided in the raw data.

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3.2.2.4 Summary

The text of this report has been formulated to address only those problem areas which affect the application of the data to the subject investigation. The attached Quality Assurance Review has identified contamination, field and laboratory duplicate analysis results, transcription error, detection limit, and insufficient documentation as the primary areas of concern. Please see the attached Support Documentation appendix for specifics on this report.

Report prepared by (b) (4)

(b) (4)

Date: July 10, 1986

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APPENDIX A

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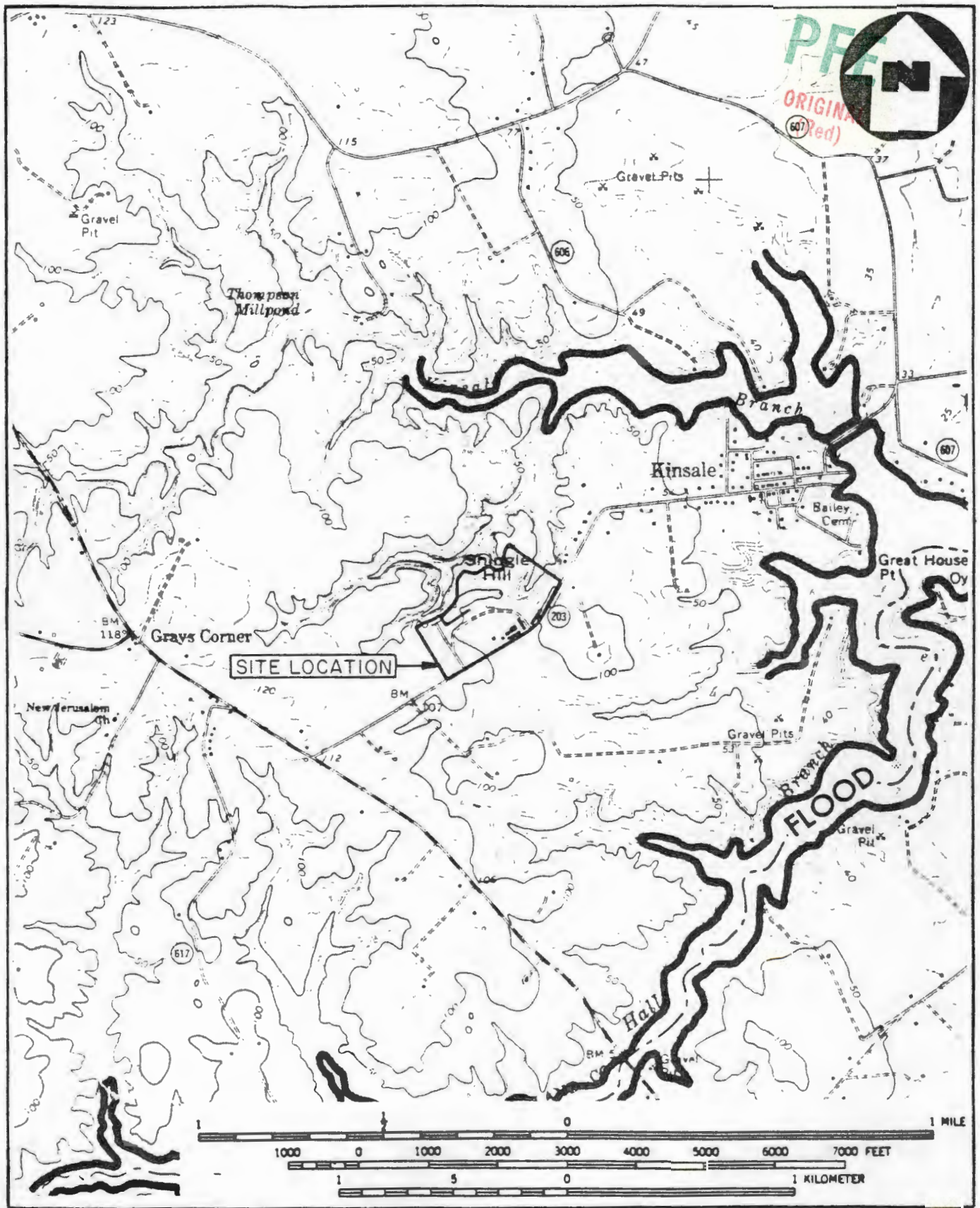
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1. COST CENTER:	REM/FIT ZONE CONTRACT TECHNICAL DIRECTIVE DOCUMENT (TDD)			2. NO.: (Red)
ACCOUNT NO.:				F3-8512-28
3. PRIORITY: <input checked="" type="checkbox"/> HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW	4. ESTIMATE OF TECHNICAL HOURS: 200	5. EPA SITE ID: VA-306	6. COMPLETION DATE: 3 wks. after QA	7. REFERENCE INFO.: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> ATTACHED <input checked="" type="checkbox"/> PICK UP
	4A. ESTIMATE OF SUBCONTRACT COST:	5A. EPA SITE NAME: <u>Potomac Supply</u> <u>Kinsale, VA</u>		
8. GENERAL TASK DESCRIPTION: <u>Perform a site inspection of the subject site.</u>				
9. SPECIFIC ELEMENTS: <u>1. Review background information</u>				
<u>2.) Contact state and local agencies for relevant information</u>				
<u>3.) Prepare and submit sampling plan to EPA for approval.</u>				
<u>4.) Coordinate lab analysis. Arrange for site access.</u>				
<u>5.) Conduct on and off site inspection and sampling.</u>				
<u>6.) Take and ship samples according to standard protocol.</u>				
<u>7.) Prepare and submit field trip report due 2 wks. after site inspection.</u>				
<u>8.) Perform Quality Assurance Review of lab data.</u>				
<u>9.) Prepare and submit report, include in cover letter recommendations for need of HRS.</u>				
<u>10.) All work on this project to be performed according to: WP-SI-1, Rev. 1.</u>				
10. INTERIM DEADLINES:				
11. DESIRED REPORT FORM: FORMAL REPORT <input checked="" type="checkbox"/> LETTER REPORT <input type="checkbox"/> FORMAL BRIEFING <input type="checkbox"/>				
OTHER (SPECIFY): <u>Coordinate with (b) (4)</u>				
<u>Refer to PA prepared under TDD F3-8410-05 for additional information</u>				
12. COMMENTS: <u>State Code 051 County Code 193</u>				
13. AUTHORIZING RPO: (SIGNATURE)				14. DATE:
15. RECEIVED BY: <input type="checkbox"/> ACCEPTED <input type="checkbox"/> ACCEPTED WITH EXCEPTIONS <input type="checkbox"/> REJECTED (CONTRACTOR RPM SIGNATURE)				16. DATE:

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APPENDIX B

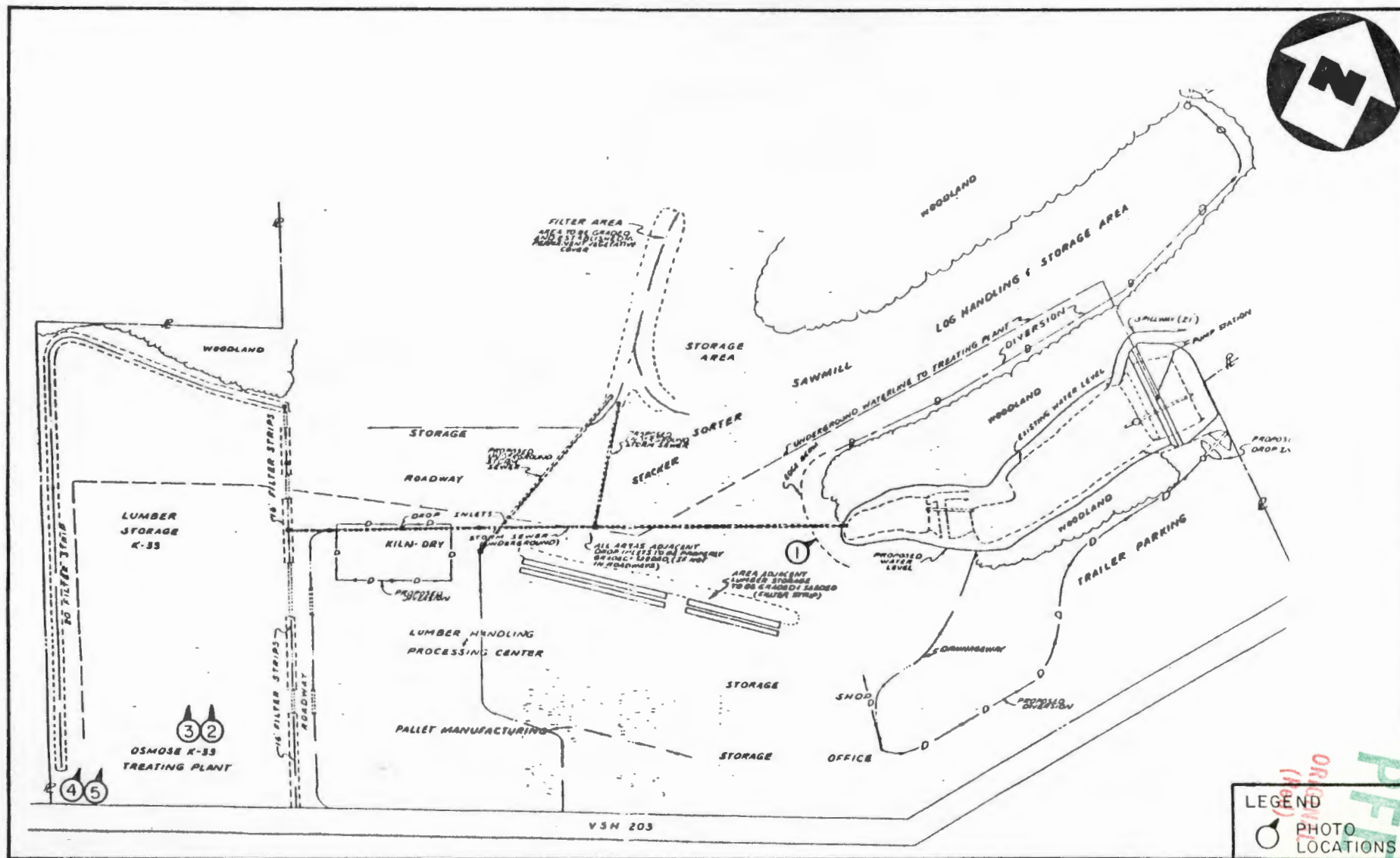


SOURCE: (7.5 MINUTE SERIES) USGS KINSALE, VA. QUAD.

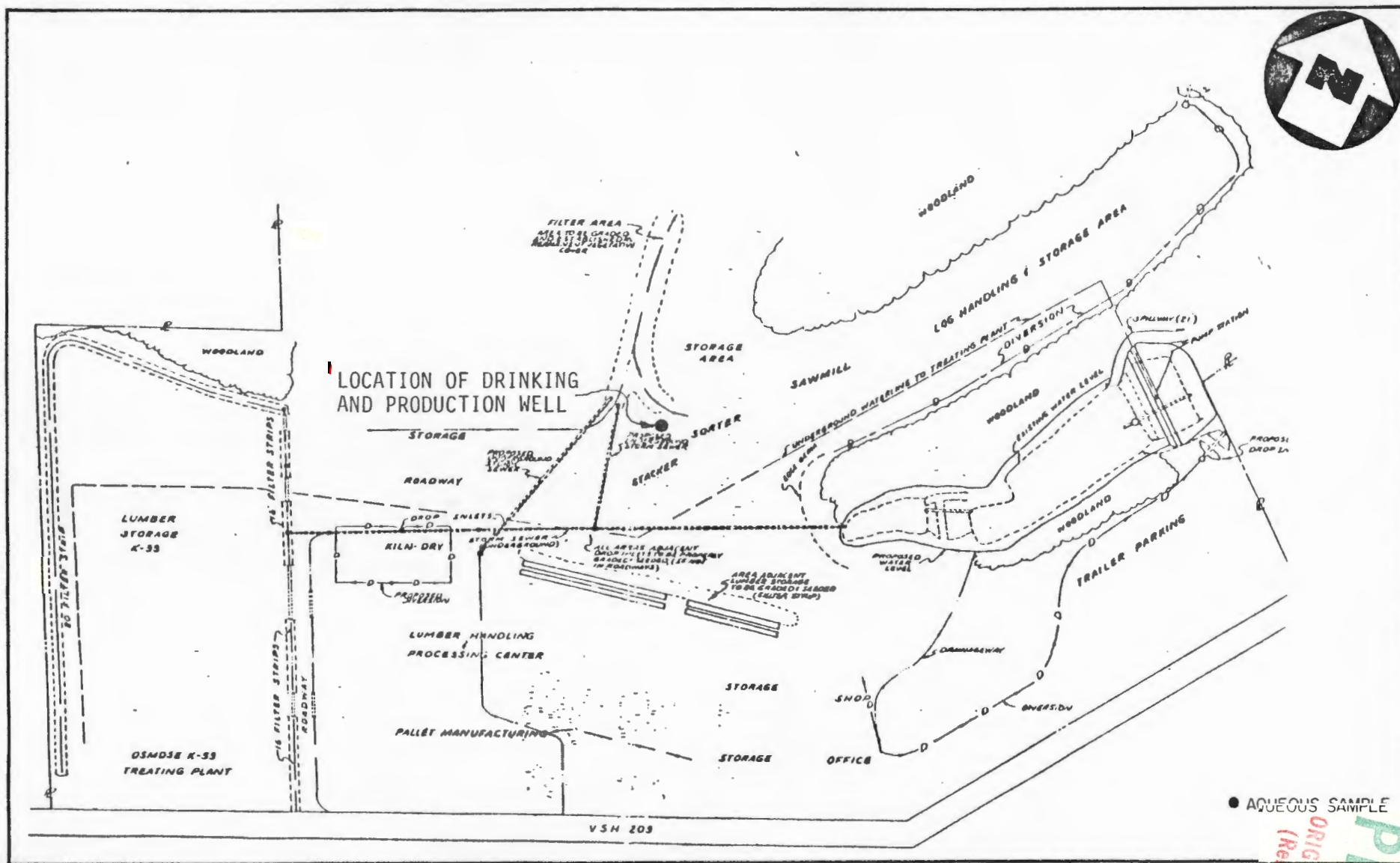
SITE LOCATION MAP
POTOMAC SUPPLY, KINSALE, VA.
 SCALE 1:24000

FIGURE 1





SITE SKETCH
POTOMAC SUPPLY, KINSALE, VA.
 (NO SCALE)



SAMPLE LOCATION MAP
POTOMAC SUPPLY, KINSALE, VA.
 (NO SCALE)

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APPENDIX C

PROJECT NAME: Potomac Supply
TDD NO: 63-8512-28

EPA SITE NO.:
REGION: III

QUALITY ASSURANCE REVIEW OF
INORGANIC ANALYTICAL DATA PACKAGE

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Case No.: 5880
Contract No.: 68-01-7068
Contract Laboratory: LMAL
Applicable IFB No.: WA84-J092
Reviewer: (b) (4)
Review Date:

Applicable Sample No's.:
MCD615, MCD622, MCD624, MCD626,
MCD627, MCD628, MCD629,
MCC936, MCD630, MCD631,
MCD632 MCD634
and MCD635

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK II COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable				
Acceptable with exceptions	✓ 1, 4,	✓ 3, 5,	✓ 2,	
Questionable				
Unacceptable				

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- | | |
|--------------------------------|---|
| ✦ ● DATA COMPLETENESS | ✦ ● INITIAL CALIBRATION VERIFICATION |
| ✦ ● BLANK ANALYSIS RESULTS | ✦ ● CONTINUING CALIBRATION VERIFICATION |
| ✦ ● MATRIX SPIKE RESULTS | ✦ ● INTERFERENCE QC RESULTS |
| ✦ ● DUPLICATE ANALYSIS RESULTS | ✦ ● DETECTION LIMITS RESULTS |
| ○ STANDARD ADDITIONS RESULTS | ✦ ● INSTRUMENT SENSITIVITY REPORTS |
| ✦ ● QUANTITATIVE CALCULATIONS | |

Data review forms are attached for each of the review items indicated above.

✦ No errors noted, no form attached.

● Spot Check performed.

Comments:

- (1) Please see blank analysis results (contamination).
- (2) Please see text (transcription error).
- (3) Please see matrix spike results.
- (4) Please see text (field duplicate sample evaluation; variability).
- (5) Please see text (insufficient documentation).

DATA EVALUATION SCORE CATEGORIES

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ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiencies are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiencies bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiencies imply the results are not meaningful.

DATA COMPLETENESS		CONC./ MATRIX															
			Lo/AQ										6/sol				
		TRAFFIC REPORT # MC	D615	D622	D624	D626	D627	D628	D629	C936	D630	D631	D632	D634	D635		
		LAB I.D. #															
FIELD QC	BLANK								✓								✓
	DUPLICATE	✓									✓						
	SPIKE		✓								✓						
TASK I: ICAP OR AA: METALS	RAW DATA	✓															✓
	TAB. RESULTS	✓															✓
	TAB. D.L.'s	✓															✓
	QA FORM	✓															✓
	ICAP INTER. QC	✓															✓
	INSTR. SENS.	✓															✓
TASK II: FURNACE AA: METALS	RAW DATA	✓															✓
	TAB. RESULTS	✓															✓
	TAB. D.L.'s	✓															✓
	QA FORM	✓															✓
	INSTR. SENS.	✓															✓
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓															✓
	TAB. RESULTS	✓															✓
	TAB. D.L.'s	✓															✓
	QA FORM	✓															✓
	INSTR. SENS.	✓															✓
TASK III: CYANIDE	RAW DATA	✓															✓
	TAB. RESULTS	✓															✓
	TAB. D.L.'s	✓															✓
	QA FORM.	✓															✓
	INSTR. SENS.	✓															✓
OTHER (SPECIFY):	RAW DATA																
	TAB. RESULTS																
	TAB. D.L.'s																
	QA FORM																
	INSTR. SENS.																
OTHER (SPECIFY):	RAW DATA																
	TAB. RESULTS																
	TAB. D.L.'s																
	QA FORM																
	INSTR. SENS.																

COMMENTS:

BLANK ANALYSIS RESULTS

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TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H ₂ O	CONTAMINANTS (CONCENTRATION / DETECTION)
AIL	Preparation Blank			BK	RMA Laboratory	Aluminum (9.5 ug/L / 200) 2 Calcium (68.8 ug/L / 1000) 2 Chromium (2.8 ug/L / 10) 2 Cobalt (3.6 ug/L / 50) 2 Copper (6.5 ug/L / 25) 1 Iron (24.9 ug/L / 100) 1 Magnesium (6.2 ug/L /) 2 Nickel (1.7 ug/L / 40) 2 Sodium (55.8 ug/L /) 2 Zinc (3.3 ug/L / 20) 1 Silver (1.2 ug/L /) 2
ALL	Field Blank			MCS629	NUS Corporation	Aluminum (60.5 ug/L /) 1 Calcium (46.6 ug/L / 1000) 2 Chromium (4.4 ug/L / 10) 2 Cobalt (2.3 ug/L / 50) 2 Copper (17.0 ug/L / 25) 1 Iron (78.2 ug/L / 100) 1 Magnesium (248.4 ug/L / 5000) 2 Nickel (15.5 ug/L / 40) 1 Potassium (8 ug/L / 5000) 2 Sodium (443.7 ug/L / 5000) 2 Zinc (19.7 ug/L / 20) 1
AIL	Preparation Blank			BK	RMA Laboratory	Aluminum (1.6 ug/L /) 2 Calcium (111 ug/L / 1000) 2 Copper (7.5 ug/L / 25) 1 Iron (36.4 ug/L / 100) 1 Potassium (218 ug/L / 5000) 2 Sodium (516.4 ug/L / 5000) 2 Zinc (7.6 ug/L / 20) 1

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITH SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

- (1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.
- (2) RESULT INFERRED FROM RAW DATA

Note: Blank results were cross-applied for both solid and liquid samples

BLANK ANALYSIS RESULTS

PFE

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H ₂ O	CONTAMINANTS (CONCENTRATION / DETECTION)
AV	field Blank low/solid			med635	NUS Corporation	Aluminum (3.854 mg/kg / 200) 2
						Barium (.5933 mg/kg / 200) 2
						Calcium (31.43 mg/kg / 5000) 2
						Copper (1.14 mg/kg / 25) 2
						Iron (13.25 mg/kg / 100) 1
						Manganese (.43 mg/kg / 15) 2
						Potassium (26.15 mg/kg / 5000) 2
						Sodium (431.7 mg/kg / 5000) 1
						Zinc (1.89 mg/kg / 20) 1
						Mercury (.0545 mg/kg / 2) 1
						Mercury (.027 mg/kg / 0.2) 2 * 2

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM & SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

* Mercury detection limit reported is 0.05 mg/kg. Since amount in field blank is greater than 1/2 DL, it ~~was~~ ^{has} to be used for evaluation.

Note: Blank results were cross-applied for both solid and liquid samples.

Form V

Q.C. Report No. 55910

SPIKE SAMPLE RECOVERY

LAB NAME ROCKY MOUNTAIN ANALYTICALDATE 5-12-86CASE NO. 5880EPA Sample No. MCD622Lab Sample ID No. -Units UG/LMATRIX WATERPFE 00014
ORIGINAL
(Red)

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Metals:					
1. ALUMINUM	75-125	1660	[36]	2000	81
2. ANTIMONY	75-125	481	26U	500	96
3. ARSENIC	75-125	19	10U	20	95
4. BARIUM	75-125	1910	[162]	2000	87
5. BERYLLIUM	75-125	48	1U	50	96
6. CADMIUM	75-125	47	5U	50	94
7. CALCIUM	75-125	124000	27000	100000	97
8. CHROMIUM	75-125	175	5U	200	88
9. COBALT	75-125	493	7U	500	99
10. COPPER	75-125	264	[5.1]	250	104
11. IRON	75-125	1140	180	1000	96
12. LEAD	75-125	20	5U	20	100
13. MAGNESIUM	75-125	58900	11300	50000	95
14. MANGANESE	75-125	209	19	200	95
15. MERCURY	75-125	1.0	0.2U	1.0	100
16. NICKEL	75-125	380	6U	400	95
17. POTASSIUM	75-125	50600	[4420]	50000	92
18. SELENIUM	75-125	7.2 S	5U	10	(72) R
19. SILVER	75-125	48	3U	50	96
20. SODIUM	75-125	166000	71700	100000	94
21. THALLIUM	75-125	39	10U	50	78
22. TIN	75-125	341	16U	400	85
23. VANADIUM	75-125	469	5U	500	94
24. ZINC	75-125	936	778	200	79
Other:					
Cyanide					
75-125					

%R = [(SSR - SR)/SA] x 100

"R"- out of control

Comments: Spiked Sample Result for Selenium determined by
Method of Standard Addition

1) Result is not significantly outside QC range

Form V

Q.C. Report No. 55911

PFE

00012

SPIKE SAMPLE RECOVERY

ORIGINAL
(Red)LAB NAME ROCKY MOUNTAIN ANALYTICALCASE NO. 5380DATE 5-13-86EPA Sample No. MCD630Lab Sample ID No. -Units mg/kgMATRIX SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R ¹
Metals:					
1. ALUMINUM	75-125	1990	2100	NR	
2. ANTIMONY	75-125	205	13U	250	82
3. ARSENIC	75-125	36	20	20	80
4. BARIUM	75-125	816	[22]	1000	79
5. BERYLLIUM	75-125	24	0.5U	25	96
6. CADMIUM	75-125	25	2.5U	25	100
7. CALCIUM	75-125	[480]	[439]	NR	
8. CHROMIUM	75-125	104	14	100	90
9. COBALT	75-125	237	3.5U	250	95
10. COPPER	75-125	131	[11]	125	96
11. IRON	75-125	12400	12600	NR	
12. LEAD	75-125	13	3.1	10	99
13. MAGNESIUM	75-125	[397]	[397]	NR	
14. MANGANESE	75-125	355	112	250	97
15. MERCURY	75-125	0.6	0.1U	0.5	120
16. NICKEL	75-125	233	3U	250	93
17. POTASSIUM	75-125	[331]	271U	NR	
18. SELENIUM	75-125	25U	2.5U	5	100 R
19. SILVER	75-125	21	1.5U	25	84
20. SODIUM	75-125	[535]	[495]	NR	
21. THALLIUM	75-125	24	5U	25	96
22. TIN	75-125	211	8U	250	84
23. VANADIUM	75-125	254	[8.3]	250	98
24. ZINC	75-125	274	26	250	99
Other:					
Cyanide	75-125				

¹ %R = [(SSR - SR)/SA] x 100

"R"- out of control

Comments: (1) the actual detection limit for selenium in sample MCD 630 may be substantially higher than reported.

Form VI

PFE

ORIGINAL
(Red)

00015

Q.C. Report No. 55910

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICALCASE NO. 5880DATE 5-12-86EPA Sample No. MCD615Lab Sample ID No. -Units UG/LMatrix WATER

Compound	Control Limit ¹	Sample(S)	Duplicate(D)	RPD ²
Metals:				
1. ALUMINUM		19U	19U	NC
2. ANTIMONY		26U	26U	NC
3. ARSENIC		10U	10U	NC
4. BARIUM		11U	11U	NC
5. BERYLLIUM		1U	1U	NC
6. CADMIUM		5U	5U	NC
7. CALCIUM		13600	13900	2.2
8. CHROMIUM		[5]	5U	NC
9. COBALT		7U	7U	NC
10. COPPER		[20]	[5.9]	NC
11. IRON		[36]	[41]	NC
12. LEAD		5U	5U	NC
13. MAGNESIUM		[4790]	[4980]	NC
14. MANGANESE		4U	4U	NC
15. MERCURY		0.2U	0.2U	NC
16. NICKEL		[14]	6U	NC
17. POTASSIUM		11000	11300	2.7
18. SELENIUM		5U	5U	NC
19. SILVER		3U	3U	NC
20. SODIUM		47500	49300	3.7
21. THALLIUM		10U	10U	NC
22. TIN		16U	16U	NC
23. VANADIUM		5U	5U	NC
24. ZINC		35	[13]	NC
Other:				
Cyanide				

X Out of Control

¹ To be added at a later date.² RPD = $[(S-D)/((S+D)/2)] \times 100$

NC - Non calculable RPD due to value(s) less than CRDL

(u) The reported result for zinc in sample MCD615 may not reflect the average concentration present

Form VI

PFE 00013

Q.C. Report No. 55911ORIGINAL
(Red)

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICALCASE NO. 5880DATE 5-13-86EPA Sample No. MCD630DLab Sample ID No. -Matrix SOILUnits mg/kg

Compound	Control Limit ¹	Sample(S)	Duplicate(D)	RPD ²
Metals:				
1. ALUMINUM		2100	1830	14
2. ANTIMONY		13U	13U	NC
3. ARSENIC		20	20	0
4. BARIUM		[22]	[21]	NC
5. BERYLLIUM		0.5U	0.5U	NC
6. CADMIUM		2.5U	2.5U	NC
7. CALCIUM		[439]	[405]	NC
8. CHROMIUM		14	13	7.4
9. COBALT		3.5U	3.5U	NC
10. COPPER		[11]	[11]	NC
11. IRON		12600	12000	4.9
12. LEAD		3.1	5.5	56
13. MAGNESIUM		[397]	[302]	NC
14. MANGANESE		112	106	5.5
15. MERCURY		0.1U	0.1U	NC
16. NICKEL		3U	3U	NC
17. POTASSIUM		271U	271U	NC
18. SELENIUM		2.5U	2.5U	NC
19. SILVER		1.5U	1.5U	NC
20. SODIUM		[495]	327U	NC
21. THALLIUM		5U	5U	NC
22. TIN		8U	8U	NC
23. VANADIUM		[8.3]	[7.6]	NC
24. ZINC		26	25	3.9
Other:				
Cyanide				

* Out of Control

¹ To be added at a later date.² RPD = $[(S-D)/((S+D)/2)] \times 100$

NC - Non calculable RPD due to value(s) less than CRDL

All Results are Acceptable

ration Verif

ORIGINAL
every ten
(Red)

Exceptions:

10A84 - 1092:

Yes ☒

[illegible]

Documentation indicates interference QC samples were run before and after every ten samples: Yes ☒

Exceptions:

ASA 74-2092:

YES ✓

[illegible]

Form IV

Q.C. Report No. 55911

ICP INTERFERENCE CHECK SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICALCASE NO 5880DATE 5-13-86Check Sample I.D. INT CHK
Check Sample Source EMSL-LV
Units mg/L00011
PFE
ORIGINAL
(Red)

Compound	Control Limits ¹		True ²	Initial		Final	
	Mean	Std. Dev.		Observed	%R	Observed	%R
Metals:							
1. ALUMINUM			503	409	81	416	83
2. ANTIMONY				0.026U		0.026U	
3. ARSENIC				0.029U		0.029U	
4. BARIUM			0.47	0.4	85	0.4	85
5. BERYLLIUM			0.46	0.48	104	0.46	100
6. CADMIUM			0.96	0.92	96	0.92	96
7. CALCIUM			499	496	99	490	98
8. CHROMIUM			0.98	0.87	89	0.86	88
9. COBALT			0.48	0.46	96	0.46	96
10. COPPER			0.51	0.51	100	0.52	102
11. IRON			198	177	89	176	89
12. LEAD	4.7	0.14	4.6	4.4	94	4.4	94
13. MAGNESIUM			497	508	102	528	106
14. MANGANESE			0.52	0.54	104	0.54	104
15. MERCURY							
16. NICKEL			0.91	0.86	95	0.85	93
17. POTASSIUM				0.54U		0.54U	
18. SELENIUM							
19. SILVER			0.99	0.93	94	0.94	95
20. SODIUM				6.4		6.2	
21. THALLIUM							
22. TIN				0.016U		0.016U	
23. VANADIUM			0.47	0.46	98	0.45	96
24. ZINC			0.95	0.83	93	0.89	94
Other:							

¹ Mean value based on n = 37.² True value of EPA ICP Interference Check Sample or contractor standard.

All recoveries are acceptable

Form IV

Q.C. Report No. 55910

ICP INTERFERENCE CHECK SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICALDATE 5-12-86CASE NO 5880Check Sample I.D. INT CHKCheck Sample Source EMSL-LVUnits mg/LPFE 00013
ORIGINAL
(Red)

Compound	Control Limits ¹		True ²	Initial		Final	%R
	Mean	Std. Dev.		Observed	%R	Observed	%R
Metals:							
1. ALUMINUM			503	417	83	408	81
2. ANTIMONY				0.026U		0.026U	
3. ARSENIC				0.029U		0.029U	
4. BARIUM			0.47	0.42	89	0.43	91
5. BERYLLIUM			0.46	0.49	107	0.51	111
6. CADMIUM			0.96	0.94	98	0.92	96
7. CALCIUM			499	506	101	510	102
8. CHROMIUM			0.98	0.9	92	0.92	94
9. COBALT			0.48	0.48	100	0.5	104
10. COPPER			0.51	0.53	104	0.53	104
11. IRON			198	183	92	186	94
12. LEAD	4.7	0.14	4.6	4.7	100	4.7	100
13. MAGNESIUM			497	506	102	527	106
14. MANGANESE			0.52	0.54	104	0.61	117
15. MERCURY							
16. NICKEL			0.91	0.89	98	0.93	102
17. POTASSIUM				0.54U		0.54U	
18. SELENIUM							
19. SILVER			0.99	0.96	97	0.93	94
20. SODIUM				6.1		6.6	
21. THALLIUM							
22. TIN				0.016U		0.016U	
23. VANADIUM			0.47	0.47	100	0.47	100
24. ZINC			0.95	0.91	96	0.91	96
Other:							

¹ Mean value based on n = 37.² True value of EPA ICP Interference Check Sample or contractor standard.

All test results are within acceptable limits.

PFE

ORIGINAL
(Red)

Detection Limits Results

Detection limits were reported for all samples analyzed: Yes ☒ No ☐

Exceptions: _____

Detection limits were less than or equal to the required detection limits specified in WA84-J092. Yes ☒ No ☐

Exceptions: _____

Instrument Sensitivity Reports

Instrument sensitivity reports were documented for all parameters: Yes ☒ No ☐

Comments: _____

Other Remarks Concerning this Case:

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Constituents

PFE

ORIGINAL
(Red)

(1) Field duplicates

Solids

(2) Un-spiked laboratory duplicates

(3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) constituents (Spike recoveries are evaluated on a separate form)

Outlier Criteria (for tabulation purposes only)			
Relative standard deviation		Equivalent Relative Percent Difference	
Solid	aqueous	Solid	aqueous
40%	20%	50%	33%

	CONCENTRATIONS						Relative standard deviation or relative percent difference	Concentration units	Footnotes
	Analysis No. 1		Analysis No. 2		Analysis No. 3				
Constituents	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
Manganese	MC0630	399	MC0634	594			39.8%		
Mercury	"	0.06	"	0			200%		
Sodium	"	[1770]	"	[1710]			3.4%		
Vanadium	"	[30]	"	[39]			26%		
Zinc	"	93	"	0			200%	(2)	
Aluminium	"	7500	"	11100			38.7%		
Arsenic	"	71	"	95			28.9%		
Barium	"	[79]	"	[112]			34.6%		
Calcium	"	[1570]	"	[1940]			21%		
Chromium	"	51	"	78			41.8%	(1)	
Copper	"	[39]	"	[52]			28.6%		
Iron	"	45100	"	75400			50.3%	(1)	
Lead	"	11	"	14			24%		
Magnesium	"	[1420]	"	[2260]			45.7%	(2)	(2)

COMMENTS (1) The report result for Cr, and Fe may not reflect the average concentration present in samples MC0630 and MC0634.

(2) Although zinc and magnesium are questionable in sample MC0630 and MC0634, if actually present may not reflect the average concentration present.

Duplicate/Triplicate Analysis of Non-Matrix Spiked (Indigenous) Constituents

PFE

ORIGINAL
(Red)

(1) Field duplicates

AQUEOUS

(2) Un-spiked laboratory duplicates

(3) Matrix spike duplicate plus corresponding unspiked sample evaluated for non-matrix spiked (indigenous) constituents (Spike recoveries are evaluated on a separate form)

Outlier Criteria (for tabulation purposes only)			
Relative standard deviation		Equivalent Relative Percent Difference	
solid	aqueous	solid	aqueous
40%	20%	50%	33%

Constituents -	CONCENTRATIONS						Relative standard deviation relative percent difference	Concentration units	Footnotes
	Analysis No. 1		Analysis No. 2		Analysis No. 3				
	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.	SAMPLE I.D.	CONC.			
Aluminum	MC0626	130	MC0936	[180]			143%		(1)
Barium	"	[34]	"	[34]			0%		
Calcium	"	[4670]	"	[4600]			1.5%		
Copper	"	0	"	[12]			200%		(1)
Iron	"	1990	"	2060			3.5%		
Magnesium	"	[2090]	"	[2070]			1%		
Manganese	"	116	"	114			1.7%		
Potassium	"	[2000]	"	[1950]			2.5%		
Sodium	"	[4750]	"	[4860]			2.3%		
Zinc	"	[16]	"	[17]		6%			
Silver	"	0	"	10			200%		(2)

COMMENTS: (1) Although the results for Al and Cu were questionable, if actually present, the reported results may not reflect the average concentration present. It is also noted that one of the duplicate samples revealed no presence of Cu.
(2) The reported result for silver may not reflect the average concentration present. Furthermore, one field duplicate showed the presence of this constituent, while

Form I

PFE
C0002

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 3-557-2490

ORIGINAL
EPA Sample No.
MCD615

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	19U	P	13. MAGNESIUM	[4790]	P
2. ANTIMONY	26U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	[14]	P
5. BERYLLIUM	1U	P	17. POTASSIUM	11000	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	13600	P	19. SILVER	3U	P
8. CHROMIUM	[5]	P	20. SODIUM	47500	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[20]	P	22. TIN	16U	P
11. IRON	[36]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	35	P

Cyanide NR

Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

PFE

ORIGINAL 00003
(Red)

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD622

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880
QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[36]	P	13. MAGNESIUM	11300	P
2. ANTIMONY	26U	P	14. MANGANESE	19	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[162]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[4420]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	27000	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	71700	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[5.1]	P	22. TIN	16U	P
11. IRON	180	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	$\frac{1}{10}$ 778	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

PFE

G0004

Form I

ORIGINAL
(Red)

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 3-557-2490

EPA Sample No.
MCD624

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	19U	P	13. MAGNESIUM	5370	F
2. ANTIMONY	26U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	11600	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	13900	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	42500	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	3U	P	22. TIN	16U	P
11. IRON	[36]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	11	P

Cyanide NR

Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

Form 1

PFE

00005

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

ORIGINAL

EPA Sample No.
MCD626

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[130]	P	13. MAGNESIUM	[2090]	P
2. ANTIMONY	26U	P	14. MANGANESE	116	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[34]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[2000]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4670]	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	[4750]	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	3U	P	22. TIN	16U	P
11. IRON	1990	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	16	P

Cyanide NR

Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD627

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[133]	P	13. MAGNESIUM	[2090]	P
2. ANTIMONY	26U	P	14. MANGANESE	119	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[35]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[2000]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4700]	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	5230	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[4.5]	P	22. TIN	16U	P
11. IRON	2090	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	16 [12]	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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Lab Manager JML

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD629

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water X Soil Sludge Other

UG/L

1. ALUMINUM	[60]	P	13. MAGNESIUM	295U	P
2. ANTIMONY	26U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	[15]	P
5. BERYLLIUM	1U	P	17. POTASSIUM	542U	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	352U	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	653U	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[17]	P	22. TIN	16U	P
11. IRON	[78]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	16 [20]	P

Cyanide NR Percent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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Form I

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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCC936

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 734
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[150]	P	13. MAGNESIUM	[2070]	P
2. ANTIMONY	26U	P	14. MANGANESE	114	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[34]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[1950]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4600]	P	19. SILVER	10	P
8. CHROMIUM	5U	P	20. SODIUM	[4860]	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[12]	P	22. TIN	16U	P
11. IRON	2060	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	177	P

Cyanide NR

Percent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

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Form I

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Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD630

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5830

QC REPORT NO. 55911

Elements Identified and Measured

Concentration:	Low	$\frac{X}{\text{Soil}}$	X	Medium	$\frac{\text{Sludge}}{\text{Other}}$
Matrix:	Water				

mg/kg dry weight

1. ALUMINUM	7500	P	13. MAGNESIUM	[1420]	P
2. ANTIMONY	46U	P	14. MANGANESE	399	P
3. ARSENIC	71	F	15. MERCURY	0.12u 0.40	CV
4. BARIUM	[79]	P	16. NICKEL	11U	P
5. BERYLLIUM	1.8U	P	17. POTASSIUM	968U	P
6. CADMIUM	8.9U	P	18. SELENIUM	8.9U	F R
7. CALCIUM	[1570]	P	19. SILVER	5.4U	P
8. CHROMIUM	51	P	20. SODIUM	[1770]	P
9. COBALT	13U	P	21. THALLIUM	18U	F
10. COPPER	[39]	P	22. TIN	29U	P
11. IRON	45100	P	23. VANADIUM	[30]	P
12. LEAD	11	F	24. ZINC	93	P

Cyanide	NR	Percent Solids (%)	28
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Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 3-557-2490

EPA Sample No.
MCD631

Date 5-13-36

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880

OC REPORT NO. 55911

Elements Identified and Measured

Concentration:	Low	<u>X</u>		Medium	<u> </u>
Matrix:	Water	Soil	X	Sludge	Other

mg/kg dry weight

1. ALUMINUM	4610	P	13. MAGNESIUM	[424]	P
2. ANTIMONY	230	P	14. MANGANESE	136	P
3. ARSENIC	17	F	15. MERCURY	$\sqrt{0.17}$ 0.20 ¹⁶	CV
4. BARIUM	[41]	P	16. NICKEL	5.30	P
5. BERYLLIUM	0.880	P	17. POTASSIUM	[612]	P
6. CADMIUM	4.40	P	18. SELENIUM	4.40	F R
7. CALCIUM	[895]	P	19. SILVER	2.60	P
8. CHROMIUM	23	P	20. SODIUM	[964]	P
9. COBALT	6.10	P	21. THALLIUM	3.80	F
10. COPPER	[21]	P	22. TIN	140	P
11. IRON	14600	P	23. VANADIUM	[17]	P
12. LEAD	7.4	F	24. ZINC	43	P

Cyanide	NR	Percent Solids (%)	57
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Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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Sample Management Office
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EPA Sample No.
MCD632

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5380QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. ALUMINUM	10400	P	13. MAGNESIUM	[10101]	P
2. ANTIMONY	54U	P	14. MANGANESE	318	P
3. ARSENIC	21U	F	15. MERCURY	0.21u 0.40 ^{0.40}	CV
4. BARIUM	[147]	P	16. NICKEL	[18]	P
5. BERYLLIUM	2.1U	P	17. POTASSIUM	[14401]	P
6. CADMIUM	10U	P	18. SELENIUM	10U	F R
7. CALCIUM	[14201]	P	19. SILVER	6.3U	P
8. CHROMIUM	[18]	P	20. SODIUM	[16201]	P
9. COBALT	[17]	P	21. THALLIUM	21U	F
10. COPPER	[27]	P	22. TIN	33U	P
11. IRON	52500	P	23. VANADIUM	[34]	P
12. LEAD	15	F	24. ZINC	68	P

Cyanide NR Percent Solids (%) 24

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

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Form 1

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Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

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EPA Sample No.
MCD634

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. ALUMINUM	11100	P	13. MAGNESIUM	[2260]	P
2. ANTIMONY	32U	P	14. MANGANESE	597	P
3. ARSENIC	95	F	15. MERCURY	0.24u 0.50 ⁷⁵	CV
4. BARIUM	[1133]	P	16. NICKEL	14U	P
5. BERYLLIUM	2.4U	P	17. POTASSIUM	1290U	P
6. CADMIUM	12U	P	18. SELENIUM	12U	F R
7. CALCIUM	[1940]	P	19. SILVER	7.1U	P
8. CHROMIUM	78	F	20. SODIUM	[1710]	P
9. COBALT	17U	P	21. THALLIUM	24U	F
10. COPPER	[52]	P	22. TIN	38U	P
11. IRON	75400	P	23. VANADIUM	[39]	P
12. LEAD	14	F	24. ZINC	131	P

Cyanide NR Percent Solids (%) 21

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager JML

Form 1

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00006

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U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD635

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5980
QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Sludge _____ Other _____

mg/kg dry weight

1. ALUMINUM	9.5U	P	13. MAGNESIUM	148U	P
2. ANTIMONY	13U	P	14. MANGANESE	2U	P
3. ARSENIC	5U	F	15. MERCURY	0.05u 0.10	CV
4. BARIUM	5.5U	P	16. NICKEL	3U	P
5. BERYLLIUM	0.5U	P	17. POTASSIUM	271U	P
6. CADMIUM	2.5U	P	18. SELENIUM	2.5U	F R
7. CALCIUM	176U	P	19. SILVER	1.5U	P
8. CHROMIUM	2.5U	P	20. SODIUM	[432]	P
9. COBALT	3.5U	P	21. THALLIUM	5U	F
10. COPPER	1.5U	P	22. TIN	8U	P
11. IRON	[13]	P	23. VANADIUM	2.5U	P
12. LEAD	2.5U	F	24. ZINC	[1.9]	P

Cyanide NR Percent Solids (%) 100

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Sample is a Water Blank

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APPENDIX D

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD630

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Sludge _____ Other _____

mg/kg dry weight

1. ALUMINUM	7500	P	13. MAGNESIUM	[1420]	P
2. ANTIMONY	46U	P	14. MANGANESE	399	P
3. ARSENIC	71	F	15. MERCURY	0.12u 0.40 ⁷⁶	CV
4. BARIUM	[79]	P	16. NICKEL	11U	P
5. BERYLLIUM	1.8U	P	17. POTASSIUM	968U	P
6. CADMIUM	8.9U	P	18. SELENIUM	8.9U	F R
7. CALCIUM	[1570]	P	19. SILVER	5.4U	P
8. CHROMIUM	51	P	20. SODIUM	[1770]	P
9. COBALT	13U	P	21. THALLIUM	18U	F
10. COPPER	[39]	P	22. TIN	29U	P
11. IRON	45100	P	23. VANADIUM	[30]	P
12. LEAD	11	F	24. ZINC	93	P

Cyanide NR Percent Solids (%) 28

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD631

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880

QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. ALUMINUM	4610	P	13. MAGNESIUM	[424]	P
2. ANTIMONY	23U	P	14. MANGANESE	136	P
3. ARSENIC	17	F	15. MERCURY	<u>0.17</u> 0.20	CV
4. BARIUM	[41]	P	16. NICKEL	5.3U	P
5. BERYLLIUM	0.88U	P	17. POTASSIUM	[612]	P
6. CADMIUM	4.4U	P	18. SELENIUM	4.4U	F R
7. CALCIUM	[895]	P	19. SILVER	2.6U	P
8. CHROMIUM	23	P	20. SODIUM	[964]	P
9. COBALT	6.1U	P	21. THALLIUM	3.8U	F
10. COPPER	[21]	P	22. TIN	14U	P
11. IRON	14600	P	23. VANADIUM	[17]	P
12. LEAD	7.4	F	24. ZINC	43	P

Cyanide NR Percent Solids (%) 57

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

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Form I

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U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD632

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55911Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. ALUMINUM	10400	P	13. MAGNESIUM	[10101]	P
2. ANTIMONY	54U	P	14. MANGANESE	318	P
3. ARSENIC	21U	F	15. MERCURY	0.21u 0.40	CV
4. BARIUM	[147]	P	16. NICKEL	[18]	P
5. BERYLLIUM	2.1U	P	17. POTASSIUM	[1440]	P
6. CADMIUM	10U	P	18. SELENIUM	10U	F R
7. CALCIUM	[1420]	P	19. SILVER	6.3U	P
8. CHROMIUM	[18]	P	20. SODIUM	[1620]	P
9. COBALT	[17]	P	21. THALLIUM	21U	F
10. COPPER	[27]	P	22. TIN	33U	P
1. IRON	52500	P	23. VANADIUM	[34]	P
2. LEAD	15	F	24. ZINC	68	P

yanide NR Percent Solids (%) 24

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

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Form 1

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00005

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD634

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 734
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55911

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Sludge _____ Other _____

mg/kg dry weight

1. ALUMINUM	11100	P	13. MAGNESIUM	122601	P
2. ANTIMONY	32U	P	14. MANGANESE	597	P
3. ARSENIC	9E	F	15. MERCURY	0.24u 0.50 ⁷⁰	CV
4. BARIUM	11121	P	16. NICKEL	14U	P
5. BERYLLIUM	2.4U	P	17. POTASSIUM	1290U	P
6. CADMIUM	12U	P	18. SELENIUM	12U	F R
7. CALCIUM	119401	P	19. SILVER	7.1U	P
8. CHROMIUM	78	P	20. SODIUM	117101	P
9. COBALT	17U	P	21. THALLIUM	24U	F
10. COPPER	1521	P	22. TIN	38U	P
11. IRON	75400	P	23. VANADIUM	1391	P
12. LEAD	14	F	24. ZINC	131	P

Cyanide NR Percent Solids (%) 21

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

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Form I

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U.S. EPA Contract Laboratory Program
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD635

Date 5-13-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55911Elements Identified and Measured

Concentration: Low X Medium
Matrix: Water Soil X Sludge Other

mg/kg dry weight

1. ALUMINUM	9.5U	P	13. MAGNESIUM	148U	P
2. ANTIMONY	13U	P	14. MANGANESE	2U	P
3. ARSENIC	5U	F	15. MERCURY	0.05u 0.10	CV
4. BARIUM	5.5U	P	16. NICKEL	3U	P
5. BERYLLIUM	0.5U	P	17. POTASSIUM	271U	P
6. CADMIUM	2.5U	P	18. SELENIUM	2.5U	F R
7. CALCIUM	176U	P	19. SILVER	1.5U	P
8. CHROMIUM	2.5U	P	20. SODIUM	[432]	P
9. COBALT	3.5U	P	21. THALLIUM	5U	F
10. COPPER	1.5U	P	22. TIN	8U	P
11. IRON	[13]	P	23. VANADIUM	2.5U	P
12. LEAD	2.5U	F	24. ZINC	[1.9]	P

Cyanide NR Percent Solids (%) 100

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Sample is a Water blankLab Manager JML

Form I

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U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

ORIGINAL
 EPA Sample No.
 MCD615

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
 SOW NO. 784
 LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	19U	P	13. MAGNESIUM	[4790]	P
2. ANTIMONY	26U	F	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	[14]	P
5. BERYLLIUM	1U	P	17. POTASSIUM	11000	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	13600	P	19. SILVER	3U	P
8. CHROMIUM	[5]	P	20. SODIUM	47500	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[20]	P	22. TIN	16U	P
11. IRON	[36]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	35	P

yanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager JMI

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD622

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[36]	P	13. MAGNESIUM	11300	P
2. ANTIMONY	26U	P	14. MANGANESE	19	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[162]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[4420]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	27000	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	71700	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[5.1]	P	22. TIN	16U	P
11. IRON	180	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	778	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 3-557-2490

EPA Sample No.
MCD624

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	19U	P	13. MAGNESIUM	5370	P
2. ANTIMONY	26U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	11600	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	13900	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	42500	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	3U	P	22. TIN	16U	P
11. IRON	[36]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	11	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD626

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[130]	P	13. MAGNESIUM	[2090]	P
2. ANTIMONY	26U	P	14. MANGANESE	116	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[34]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[2000]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4670]	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	[4750]	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	3U	P	22. TIN	16U	P
11. IRON	1990	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	<u>16</u>	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager JML

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U.S. EPA Contract Laboratory Program
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD627

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[133]	P	13. MAGNESIUM	[2090]	P
2. ANTIMONY	26U	P	14. MANGANESE	119	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[35]	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[2000]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4700]	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	5280	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[4.5]	P	22. TIN	16U	P
11. IRON	2090	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	14 [12]	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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Lab Manager JML

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U.S. EPA Contract Laboratory Program
Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD628

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[168]	P	13. MAGNESIUM	[3640]	P
2. ANTIMONY	26U	P	14. MANGANESE	50	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[50]	P	16. NICKEL	6U	P
5. BERYLLIUM	[1.2]	P	17. POTASSIUM	[1680]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[3500]	P	19. SILVER	[3.1]	P
8. CHROMIUM	5U	P	20. SODIUM	5060	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	3U	P	22. TIN	16U	P
11. IRON	1270	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	ug [4.6]	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCD629

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 5880

QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

UG/L

1. ALUMINUM	[60]	P	13. MAGNESIUM	295U	P
2. ANTIMONY	26U	P	14. MANGANESE	4U	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	11U	P	16. NICKEL	[15]	P
5. BERYLLIUM	1U	P	17. POTASSIUM	542U	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	352U	P	19. SILVER	3U	P
8. CHROMIUM	5U	P	20. SODIUM	653U	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[17]	P	22. TIN	16U	P
11. IRON	[78]	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	10 [20]	P

Cyanide NR Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

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Sample Management Office
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703/557-2490 FTS: 557-2490

EPA Sample No.
MCC936

Date 5-12-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 78
LAB SAMPLE ID. NO. -

CASE NO. 5880

QC REPORT NO. 55910

Elements Identified and Measured

Concentration: Lo X Medium
Matrix: Water X Soil Sludge Other

UG/L

1. ALUMINUM	[150]	P	13. MAGNESIUM	[2070]	P
2. ANTIMONY	261	P	14. MANGANESE	114	P
3. ARSENIC	10U	F	15. MERCURY	0.1U	CV
4. BARIUM	[34	P	16. NICKEL	6U	P
5. BERYLLIUM	1U	P	17. POTASSIUM	[1950]	P
6. CADMIUM	5U	P	18. SELENIUM	5U	F R
7. CALCIUM	[4600]	P	19. SILVER	10	P
8. CHROMIUM	5U	P	20. SODIUM	[4860]	P
9. COBALT	7U	P	21. THALLIUM	10U	F
10. COPPER	[12]	P	22. TIN	16U	P
11. IRON	2060	P	23. VANADIUM	5U	P
12. LEAD	5U	F	24. ZINC	177	P

Cyanide NR

Percent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager JML

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